Claims:

1. A method for distributing two fluids into and out of the channels in a multi-channel monolithic structure where the channel openings are spread over the entire cross-sectional area of said structure and said channels have joint walls,
characterised in that
one fluid is fed through a slot in one or more gaps in a manifold head which is sealed to one face of said monolith structure,
the other fluid is fed into a tunnel in said manifold head and further through slots in said tunnel wall and into one or more gaps in said manifold head,
said fluids are distributed from their respective gaps into said channels in such a way that at least one channel wall is in common for said fluids,
said fluids are collected in their respectively gaps in a manifold head which is sealed at the opposite side of said structure where the first manifold head is sealed,
the fluids are then respectively led through a slot from one or more gaps and slots in a tunnel wall in said last mentioned manifold head.

2. A method for distributing two fluids into and out of the channels in a multi-channel monolithic structure where the channel openings are spread over the entire cross-sectional area of said structure and said channels have joint walls,
characterised in that
one fluid is fed into a first tunnel in a manifold head and through slots in said first tunnel wall and further into one or more gaps in said manifold head,
the other fluid is fed to a second tunnel in said manifold head and through slots in said second tunnel wall and further into one or more other gaps in said manifold head,

said fluids are distributed from their respective gaps into said channels in such a way that at least one channel wall is in common for said fluids,
said fluids are collected in their respective gaps in said manifold head,
the fluids are then led out of their respectively slots in said tunnels walls.

3. A method according to claim 1 or 2,
characterised in that
said fluids are fed into and out of the same manifold head.

4. A method according to claims 1-3,
characterised in that
said fluids are distributed in said channels in such a way that one fluid flowing in a channel has the other fluid flowing in all the adjacent channels.

5. A method according to claims 4,
characterised in that
aid fluids from said gaps are distributed in said channels as in a checkboard pattern with one fluid in the "black" channels and the other fluid in the "white" channels.

6. A manifold head for distribution of two fluids into and out of the channels in a multi-channel monolithic structure where the channel openings are spread over the entire cross-sectional area of said structure and where said channels have joint walls,
characterised in that
said manifold head comprises:
at least three parallel dividing plates joined together with spacers to form gaps with slots between said plates and

end cover plates joined in parallel to said dividing plates where said dividing plates and cover plates have one opening forming a tunnel with slots through said joined plates.

7. A manifold head according to claim 6,
characterised in that
said dividing plates and cover plates have at least one hole each forming a tubular space (tunnel) through said joined plates and where said tunnel wall has slots communicating with said gaps

8. A unit,
characterised in that
said multi-channel unit comprises:
a monolithic structure where the channel openings are spread over the entire cross-sectional area of said structure and said channels have joint walls and a manifold head according to claim 6 or 7 which is sealed to at least one face of said structure.

9. A unit,
characterised in that
said unit comprises:
a multi-channel monolithic structure where the channel openings are spread over the entire cross-sectional area of said structure and said channels have joint walls,
a manifold head according to claim 6 or 7 which is sealed to at least one face of said structure,
and at least one hole plate which is sealed between said manifold head and said structure on said face where the channel openings are.

10. A unit according to claim 9,
characterised in that
said holes are arranged in such a way that two fluids can flow from said monolith channels to said gaps and vice versa.

11. A unit according to claim 8 or 9,
characterised in that
one or more of said channel walls are coated with one or more catalytic active components.

12. A unit according to claim 8 or 9,
characterised in that
said channel openings are evenly distributed over the entire cross-sectional area of said monolith structure as in a chessboard pattern.

13. A unit according to claim 8 or 9,
characterised in that
said structure has channel walls oriented in 45 degrees angle to the outer structure walls.

14. A unit according to claim 8or 9,
characterised in that
said dividing plates are sealed to a hole plate.

15. A unit according to claim 8 or 9,
characterised in that
said dividing plates are sealed directly to the monolith channel walls.

16. A unit according to claim 8 or 9,
characterised in that
said manifold head is sealed to at least one face of the monolith structure where the channel openings are.

17. A stack,
characterises in that
said stack comprises:

two or more multi-channel monolithic structures where the channel openings are spread over the entire cross-sectional area of said structures and said channels have joint walls,
at least one manifold head according to claim 6 or 7 which is sealed to at least one face of said structure,
at least one plate with holes which is sealed between said manifold head and said structure on said side where the channel openings are,
and at least one connector plate or other coupling device between units.

18. A row of units or stacks,
characterised in that
said row comprises
units according to claims 8-16 or stacks according to claim 17 coupled together.

19. A row of units or stacks,
characterised in that
said row comprises
units according to claims 8-16 or stacks according to claim 17 where a sealing ring and two different types (type A and B) of end covers are used to connect said manifold head of one unit or stack with said manifold head of another neighbouring unit or stack.

20. A block,
characterised in that
said block comprises rows of units or stacks according to claim 18 or 19 which are stapled face to face.

21. A reactor for mass and/or heat transfer between two fluids, **characterised in that** one or more of the units according to claim 8-16 or stack according to claim 17 or row of units or stacks according to claim 18 or blocks according to claim 20 is integrated in said reactor.

22. A method for mass and / or heat transfer between two fluids, **characterised in that** said two fluids are distributed through one or more units according to claim 8-16 or stack according to claim 17 or row of units or stacks according to claim 18 or blocks according to claim 20.